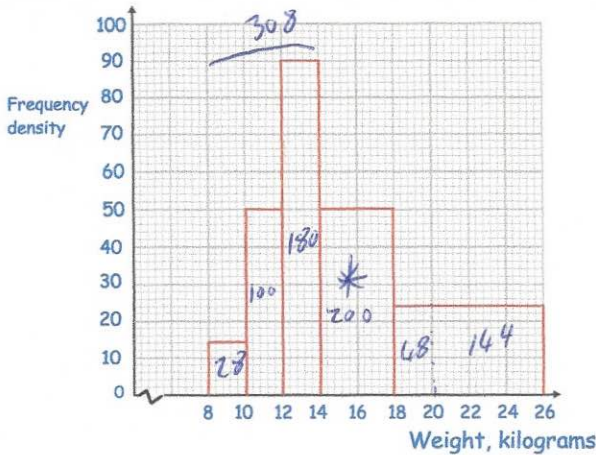


9th February



Corbettmaths



The histogram shows the weights of 700 dogs.

What percentage of the dogs weighed over 20kg?

$$6 \times 24 = 144$$

$$\frac{144}{700} \times 100 = 20.571\%$$

Calculate an estimate of the median

350th value

$$14 + \frac{42}{200} \times 4 = 14.84$$

The number of bacteria on a petri dish is given by the formula.

N = number of bacteria

t = time (in hours)

$$N = A \times 2.71^{0.2t}$$

At the beginning of the experiment there are 80 bacteria.

$$t = 0$$

Show A = 80

$$80 = A \times 2.71^0$$

$$80 = A \times 1$$

$$A = 80$$

How long would it take for there to be 200 bacteria?

80 × 2.71^{0.2t}

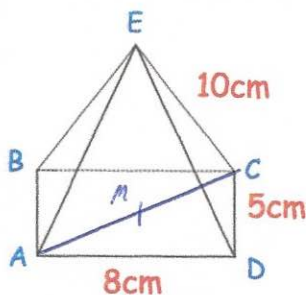
Hours	bacteria
1	97.652
2	119.2
3	145.5
4	177.6
5	216.9

5 hours
(or 4.595 hours)

How many bacteria would there be after one day?

$$80 \times 2.71^{0.2 \times 24}$$

$$9579.49..$$



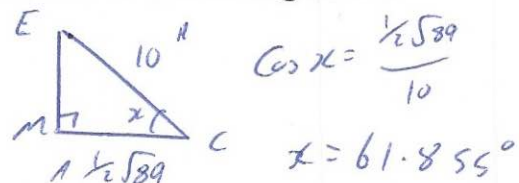
$$AC^2 = 5^2 + 8^2$$

$$= 89$$

$$AC = \sqrt{89}$$

$$ME = \frac{1}{2} \sqrt{89}$$

Calculate the size of angle ACE



$$\cos x = \frac{\frac{1}{2} \sqrt{89}}{10}$$

$$x = 61.855^\circ$$